

REMARKS

PLEASE NOTE THAT NEW ATTORNEYS HAVE TAKEN OVER  
PROSECUTION OF THIS APPLICATION. PLEASE ADDRESS ALL FURTHER  
COMMUNICATIONS TO

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The Official Action of June 30, 2004, and the prior  
art relied upon therein have been carefully reviewed. The  
claims in the application are now claims 1,2,5-7, 10-13, 19-  
23, 25, 26 and 28-30, and these claims define patentable  
subject matter warranting their allowance. Accordingly, the  
applicants respectfully request favorable reconsideration and  
allowance.

The present application is a continuation of parent  
application 09/341,237, filed on January 14, 1998, as  
PCT/IL98/00016, now U.S. patent 6,413,506 B1. As applicants  
did in the parent application, applicants respectfully claim  
priority from their corresponding priority application filed  
in Israel on January 14, 1997. Acknowledgment by the PTO of  
the receipt of applicants' papers filed under §119 would be  
appreciated.

New claims 29 and 30 have been added, based on the examples. These claims define patentable subject matter for the same reasons as the other claims, as pointed out previously (respectfully incorporated by reference), and further below.

The previous indication of allowability of claims 23 and 24 is understood to have been withdrawn. Claims 24 has now been deleted and claims 23 has been amended consistent with example 3.

Before addressing each of the rejections in detail, applicants wish to briefly explain the invention. Thus, except for possible nonessential additives, such as limonene, the composition of the present invention contains but two components other than water, these two components being (1) an acid (preferably a biodegradable carboxylic acid, claim 5, whereby the entire composition is biodegradable) in an amount sufficient to neutralize ammonia and indolic amines in the excrement, preferably the acid being present in an amount of 1% to 10% w/v (e.g. claim 7), and (2) at least 0.1% (1,000 ppm) of a biologically degradable non-toxic and ecologically safe water soluble polymer, the polymer being present in an amount sufficient for forming, upon drying, a thin film vapor barrier. The molecular weight of the polymer should not be

excessively great, as a high molecular weight polymer may not be easily or sufficiently biodegradable.

The polymers may be any of those set forth in claim 1, with the understanding that those polymers must water soluble, biologically degradable, non-toxic and ecologically safe, as well as being capable of forming, upon drying, a thin film vapor barrier<sup>1</sup>. However, such polymers preferably exclude poly(meth)acrylamide, not called for in claims 20, 21, 22, 23 and the claims which depend therefrom. It is especially important that the quantity of such polymer be sufficient to form the required film vapor barrier.

Claims 1, 2, 5-8, 11, 19, 20, 25 and 26 have been rejected as obvious under §103 from Kobayashi et al USP 4,909,986 (Kobayashi). This rejection is respectfully traversed.

Claim 1 has been amended above to make more explicit that the polymer is not only a barrier forming agent for blocking the vapor of offensive odor producing compounds, but is also present in an amount sufficient for doing so, although applicants do believe that such subject matter was previously at least implicit in the claims. In addition, consistent with

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<sup>1</sup> Not all polymers from the broad categories meet these requirements, and applicants' claims cover only those polymers which do meet such requirements.

the recitation that the polymer is "biologically degradable", claim 1 now specifies that it has a molecular weight consistent therewith; again, this is of course implicit and also inherent in claim 1 as previously submitted.

Claim 2 has been amended to specify the composition as applied, i.e. in use.

As the composition only contains two essential ingredients other than the carrier which comprises water, and as claim 5 specifies that the acid comprises a biodegradable carboxylic acid, and as the polymer is already recited as being biodegradable, it follows that the composition is biodegradable, and that has now been made explicit in claim 5.

Claim 8 has been deleted without prejudice, its subject matter having been incorporated into claim 1.

Claim 20 has been redrafted in independent form. Applicants do not see that Koobayashi shows or suggests the use of a water soluble film forming polymer which is a polyacrylic acid.

Claim 25 continues to specify that the water soluble film forming polymer has a molecular weight of about 16,000, far different from anything disclosed by Kobayashi as discussed in more detail below.

Kobayashi has been applied previously and has been discussed by applicants previously. As pointed out in the

Kobayashi Abstract, the water-soluble organic polymer disclosed and taught by Kobayashi to be used has a number average molecular weight of at least 100,000. Also see column 2, lines 18 *et seq.* Indeed, at column 2, commencing at line 36, Kobayashi indicates that the water-soluble organic polymer having a number average molecular weight of at least 100,000 is an "essential" component.

While the lengthy Kobayashi disclosure is somewhat difficult to understand, due in part to the nature of it "shotgun" or "basket" disclosure and the wide variability of the options it presents, it appears that what is absolutely necessary according to the teachings of Kobayashi is that the molecular weight must be at least 100,000 and preferably at least 1,000,000 (e.g. column 6, lines 20 and 31-35); and that the polymer have at least one group as specified for example at column 2, lines 22-30. The table at the foot of column 6 which discloses examples of the Kobayashi polymers, discloses a minimum molecular weight of 600,000 (Example 7), with all other well above 1,000,000, e.g. 5,000,000, 6,000,000, and 8,000,000 (six of the ten examples). None of applicants' polymers as specified in any of claims 21, 22 or 23 conform to the Kobayashi requirements.

While the paragraph at column 2, lines 18-35 at least implies that only the aqueous medium and polymer are

necessary, the paragraph commencing at column 2, line 36, indicates that an additional component is necessary, namely one of the components listed at column 2, lines 46-54 and designated as materials (a) through (h). Among these, there is mentioned (a) a water-soluble organic polybasic acid or salt thereof, these being described in more detail at column 7, commencing at line 53. Explicitly mentioned are citric acid and oxalic acid, which acids are also usable in the present invention. Applicants do not see that either of these acids are used in any of the Kobayashi examples.

Perhaps most importantly, Kobayashi discloses and teaches using only a very small quantity of its high molecular weight, water soluble polymer. In this regard, the following text appears at column 9, commencing at line 49:

The concentration of the water-soluble organic polymer used in this invention is 0.05 to 50 ppm, ... most preferably 0.5 to 5 ppm,....

There is no equivocation. The maximum quantity used is 50 ppm, most preferably only 5 ppm. This makes sense in the context of Kobayashi which does not teach the formation of a film at all, but only the use of a sufficient quantity of the polymer to effect deodorizing "presumably because of the flocculating action of the polymer" (see column 9, lines 16 and 17).

The small quantity of polymer required by Kobayashi is far less than what is the minimum necessary according to the present invention. This is a crucial compositional and functional difference. The small quantity of polymer required according to Kobayashi is not sufficient to form a vapor barrier, and indeed there is no allegation in Kobayashi of forming such a vapor barrier. As noted above, the small quantity of polymer in Kobayashi is sufficient only to provide a "flocculating" action, but is clearly not sufficient to provide a vapor barrier as claimed.

Thus, **all** of applicants' claims define patentable subject matter (both novel and unobvious under §§102 and 103) over Kobayashi in the recitation of a minimum concentration of polymer of 0.1%. Converting the 50 ppm maximum of Kobayashi to a percentage, this turns out to be 0.00005%. If one skilled in the art were to go contrary to Kobayashi and increase the quantity of polymer by **1000 times**, the amount would still be only half of the minimum required according to the present invention.

Of course, to increase the quantity of the polymer even far less than 1000 times would be to fly in the face of Kobayashi, the very antithesis of obviousness.

To summarize, the present invention concerns water soluble polymer composition for forming a film, while

Kobayashi concerns water soluble polymers for flocculation. As a result, both the **concentrations** of the polymers in the two compositions as well as their **molecular weight** are different. In order to form a film (the present invention) wrapping the excrement, the concentration of the polymer in the composition should be sufficiently high, e.g. 0.1% (1000 ppm) to 10%. Kobayashi at column 9, lines 49-52 clearly states "the concentration... is 0.05 to 50 ppm, preferably 0.1 to 20 ppm, most preferably 0.5 to 5ppm." Such a concentration cannot form a valid film.

Turning to the discussed Example 55 (column 24, lines 38-42), the Example clearly states "...was sprayed in a concentration of 1ppm to 10ppm...". Example 55 refers back to "The 0.1 aqueous solution of the polymer used in Example 54...". Indeed Example 54 describes the preparation of a 0.1% aqueous solution which serves as a **source** (stock) solution for taking the solution prior to actual use and **diluting it** to the desired concentration. Example 54 clearly states at line 15 "65 parts by weight of 4.0 ppm as solids of the 0.1% aqueous solution mentioned above...."

The molecular weight of the polymers in the Kobayashi disclosure are detailed at column 6, lines 16-35 where it is stated that the higher the viscosity the better. As noted above, the minimum molecular weight is "at least

100,000" (line 16) and preferably it should be 1,000,000 and more (lines 30-35; <1000 to 3000 centipoises).

Moreover, the present invention deals with a **biodegradable composition** while Kobayashi deals with a composition which should be maintained as is, as long as possible. This is explained in length in Kobayashi in the paragraph spanning columns 9 and 10, column 9, line 52 to column 10, line 5. In particular, beginning at line 52, "It is very important to prevent biodegradation of the polymer and to take measures so as to maintain the level of the molecular weight of the polymer. For this purpose it is desirable to sterilize water for dilution... Preferably a preservative or antiseptic is added... Examples of the preservative... include ethanol... furthermore, to prevent inclusion of putrefying bacteria... it is preferred to control devices... and in the deodorizing operation carefully throughout the entire operations."

The changes required in Kobayashi to reach the claimed subject matter are not taught in or by Kobayashi, and indeed are contrary to Kobayashi. Applicants' claims define non-obvious subject matter.

Withdrawal of the rejection is in order and is respectfully requested.

Claim 2 further defines patentable subject matter over Kobayashi as there is no disclosure in Kobayashi, nor is it obvious from Kobayashi or even possible from Kobayashi, to provide the deodorizing composition in the form of a film over the animal excrement.

Claim 5 further defines nonobvious subject matter over Kobayashi as Kobayashi tries very hard to make its composition non-biodegradable, as pointed out above. The feature recited in the dependent portion of claim 5 flies in the face of Kobayashi, and is the very antithesis of obviousness.

As pointed out above relative to claim 20, Kobayashi does not disclose a polyacrylic acid polymer. All the polymers of Kobayashi require the particular substituents as disclosed at column 2, lines 22-30. Claim 20 is therefore unobvious from Kobayashi for this additional reason.

The dependent portion of claim 26 further adds nonobvious subject matter because tap water cannot be tolerated in the Kobayashi composition which requires sterility, e.g. distilled water including 3% alcohol. Thus, to ensure sterility, Kobayashi uses distilled water only, adds alcohol and various antiseptic agents such as sulphuric

acid, iodine pentoxide and metal hyperchlorides, at least some of which are moreover environmentally unfriendly.

Claims 1, 2, 5-8, 10, 11, and 19-26 have been rejected as obvious under §103 from Kobayashi in view of Suzuki USP 5,004,600 (Suzuki). This rejection is respectfully traversed.

The proposed combination would not have been obvious because to adopt Suzuki would be to fly in the face of Kobayashi. Again, Kobayashi **requires** polymers with particular substituents, and using the Suzuki polymers would violate that requirement of Kobayashi.

As regards quantity, using a greater quantity than the maximum of 50 ppm permitted by Kobayashi would also violate Kobayashi. Going contrary to, i.e. flying in the face of, a requirement of Kobayashi cannot be validly said to have been obvious.

It is fundamental patent law that a combination of references is improper if the result of such a combination is to go contrary to what one of the references requires. Cases in support of this proposition include *In re Meunier*, 168 USPQ 43, 45, 46; *Ex parte Hartmann*, 186 USPQ 366; *Ex parte Westphalen*, 159 USPQ 507, 508; *Ex parte Thompson*, 184 USPQ 558; *Ex parte Eastwood*, 163 USPQ 316.

Withdrawal of the rejection is in order and is respectfully requested.

Claims 11-13 and 28 have been rejected as obvious from Kobayashi in view of Shimizu USP 4,839,089 (Shimizu). This rejection is respectfully traversed.

Shimizu has not been cited to make up for the deficiencies of Kobayashi pointed out above, and indeed does not do so. Therefore, even if the proposed combination were obvious, it would not reach any of applicants' claims.

Withdrawal of the rejection is in order and is respectfully requested.

Claims 1, 5-9, 10, 19-22, 25 and 26 have been rejected as obvious under §103 from Dodd et al USP 5,882,638 (Dodd). This rejection is respectfully traversed.

Dodd is a far cry from the present invention. It discloses an aqueous composition adapted for use on the skin and hair which critically and essentially comprises cyclodextrin, and optionally one or more of dimethicone, a low molecular weight polyol, preservative, zinc salt, water soluble polymer, etc. Applicants' claims by use of the "consisting essentially of" transitional language, excludes any meaningful quantity of the essential uncomplexed cyclodextrin of Dodd.

As regards the optional water-soluble polymer, the rejection correctly notes the mention of polyacrylic acid (column 7, line 30). However, claim 20 even though specifying applicants' polymer as being a polyacrylic acid, defines over Dodd for the reasons pointed out above, i.e. claim 20 excludes the presence of Dodd's essential uncomplexed cyclodextrin.

Claim 20 further defines over Dodd in its recitation of being film forming. Bearing in mind the intended use of the Dodd composition, it would not have been obvious to modify Dodd to provide a film forming composition because no one would accept a barrier film on the skin which would be both uncomfortable and prevent respiration.

The rejection makes reference to statements of intended use not creating a structural difference. Applicants are not relying on any statements of intended use. Applicants' claims do, however, use functional language to characterize the composition, such functional language defining what the invention is rather than how it is intended to be used. (Please see *In re Garenero*, 162 USPQ 221, 223 (CCPA 1969); *In re Steppan*, 156 USPQ 143, 147; *In re Moore et al*, 169 USPQ 236, 237, 239.

Withdrawal of the rejection is in order and is respectfully requested.

Applicants believe that the section of the Office Action commencing at the top of page 7 under the heading "Response to Arguments" has been mostly addressed above.

However, applicants do wish to make note of the fact that a Declaration is **evidence**. Statements of fact which appear in such a Declaration must be accepted in the absence of evidence or good reasoning to the contrary. As Professor Levy is an expert, his opinions also are entitled to weight, as expert opinion. Notwithstanding the absence of comparative side-by-side results, the Levy Declaration cannot be properly disregarded.

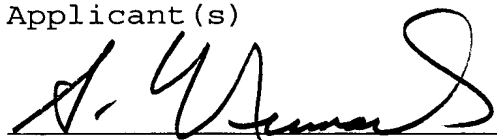
The prior art documents made of record and not relied upon have been noted, along with the implication that such documents are deemed by the PTO to be insufficiently pertinent to warrant their application against any of applicant's claims.

Favorable reconsideration and allowance are earnestly solicited.

Respectfully submitted,

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